# ZOOLOGICA SCIENTIFIC CONTRIBUTIONS OF THE NEW YORK ZOOLOGICAL SOCIETY

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## MAMMALS COLLECTED BY WILLIAM BEEBE AT THE BRITISH GUIANA TROPICAL RESEARCH STATION

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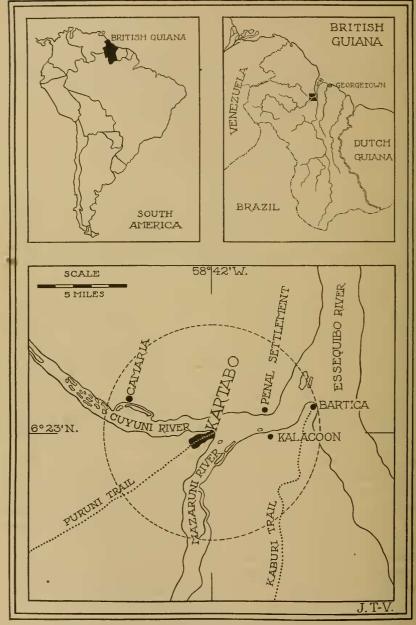
Associate Curator of Mammals of the Western Hemisphere American Museum of Natural History

When the New York Zoological Society established a Tropical Research Station in British Guiana, with Mr. William Beebe as Director, an arrangement was made whereby the Department of Mammals of the American Museum was to receive such specimens of mammals as might be collected from time to time.

The first work of the Station was done in 1916, and has been carried on at intervals ever since, resulting in the accession of some five hundred and twenty-one specimens of mammals. The collecting has been done, for the most part, at three points, Kartabo, Kalacoon and the Penal Settlement, all, as shown on the accompanying map, lying within a small area forty-five miles inland from the coast. This region is included in the humid, tropical, rain forest zone<sup>1</sup> and is a most important locality, not alone for the richness of the mammalian fauna but because of the great historical value which attaches to specimens secured from northeastern South America. Many of the classical species, many of the forms described by Linnæus, have their habitat somewhere within this general region, so that a series from the Guianas may be considered as typical.

The work of the Station staff was so occupied by their own particular problems that the collecting of mammals was an incidental feature and, in consequence, the list of species secured there is far from complete. On the other hand, the aggregate amount of time spent at the Station has resulted in the accumulation of large series of some species, and a very gratifying

<sup>&#</sup>x27;For photographs and details of this region see, "Tropical Wild Life in British Guiana", William Beebe, N. Y. Zool. Soc., 1917, and Zoologica, III, 1921, No. 1, by Henry Fairfield Osborn.



LOCATION OF THE TROPICAL RESEARCH STATION OF THE NEW YORK ZOOLOGICAL SOCIETY The circle represents a radius of six miles.

## 1921] Anthony: British Guiana Mammals

number of rarities. Four forms new to science were taken and in addition there are ten species new to the museum collections. In all fifty-six species and subspecies are represented. No small part of the value to be attached to this collection lies in the number of skeletons preserved, since there are skeletons for nearly all of the species represented by a series of any size.

In the identification of this collection, I have received valuable assistance from Mr. Gerrit S. Miller of the United States National Museum, through the loan of comparative material, while I am indebted to Dr. Wilfred H. Osgood of the Field Museum, for opinions on some nomenclatural points.

#### 1. Didelphis marsupialis marsupialis Linnæus.

1758. Didelphis marsupialis Linnæus, Syst. Nat., I, p. 54, (part). 1902. Didelphis marsupialis Allen. Bull. Amer. Mus. Nat. Hist., XVI, p. 257.

Six specimens: Kartabo, 5 skins, 4 skulls, 1 skeleton.

#### 2. Marmosa chloe Thomas.

1907. Marmosa chloe Thomas. Ann. and Mag. Nat. Hist., (7) XX, p. 167.

Seven specimens: Kartabo, 7 skins, 6 skulls, 4 skeletons.

These animals are practically topotypes of *chloe*, since this species was described from the Demerara river, 29 miles above Georgetown.

#### 3. Marmosa cinerea demerarae Thomas.

1905. Marmosa cinerea demerarae Thomas. Ann. and Mag. Nat. Hist., (7), XVI, p. 313.

Eight specimens: Kartabo, 7 skins, 4 skulls, 5 skeletons.

The series, which includes both adults and half grown young, agrees quite closely with the type description of *demerarae*, type locality, Comackka, eighty miles up the Demerara River. 4. Metachirus nudicaudatus nudicaudatus (Geoffroy).

1803. Didelphys nudicaudata E. Geoffroy. Cat. Mus., p. 142.

Immature specimen: Kartabo, skin with skeleton.

## 5. Monodelphis brevicaudata brevicaudata (Schreber).

1778. Didelphys brachyuros Schreber. Säug. III, 549 pl. cli (plate published in 1777). Peramys brevicaudata auctorum.

One specimen: Kartabo, skin with skeleton.

The material for comparison with this specimen of *Peramys* is too inadequate to enable me to do more than assign it provisionally to *brevicaudata*, on the assumption that the animal of the Guiana lowlands is Schreber's species. Judging from the limited series of red Peramys in the collection from Venezuela and British Guiana, there exists either a very great degree of individual variation or else a need for additional new species.

## 6. Bradypus cuculliger Wagler.

1831. Bradypus cuculliger Wagler, Isis, p. 605.
1871. Arctopithecus cuculliger Gray, Proc. Zool. Soc. London, p. 440.

Eight specimens: Kartabo, 5 skins, 5 skulls, 2 skeletons; Kalacoon, 1 skin; Kyk-over-al, 1 skin, 1 skull.

This series is referred to *cuculliger* upon the basis of the descriptions given in the two references cited above, and with regard to the fact that Gray had a specimen from Demerara which he called *cuculliger*. The agreement with the descriptions is fairly close and the series averages darker in color than a series of tridactylus flaccidus from Venezuela; but the color pattern is rather similar to that of *flaccidus*, in fact so similar that, should my identification of *cuculliger* be correct, I believe that *flaccidus* should stand as a subspecies of *cuculliger* and not of tridactylus. Compared with specimens of tridactylus from Santarem, Brazil, the Guiana specimens are radically different in the coloring of the head, throat and neck.

## Anthony: British Guiana Mammals

Choloepus didactylus Linnæus.
 Bradypus didactylus Linnæus. Syst. Nat., I, p. 51.
 Two specimens: Kalacoon, 1 skin, 1 odd skull.

## 8. Myrmecophaga tridactyla Linnæus.

## 1758. Myrmecophaga tridactyla Linnæus, Syst. Nat., p. 35.

One of these anteaters was brought back alive and placed in the New York Zoological Park. It has since died and is now in the Museum collection. It was taken at Kartabo and was only about half grown.

9. Tamandua tetradactyla tetradactyla (Linnæus).

1766. Myrmecophaga tetradactyla Linnæus, Syst. Nat. I, p. 52.

Twelve specimens: Kartabo, 9 skins, 10 skulls, 2 skeletons; Kalacoon, 1 skin, 2 skulls.

The color of the pelage of these anteaters varies so considerably that, were the two extreme examples to be considered alone, they might well be thought to be distinct from one another. The dark dorsal area is almost completely absent from one specimen which in consequence greatly resembles the yellow *longicaudata*. However, the apparent gap between this yellow specimen and the darkest of the series, is well bridged over by the specimens of intermediate coloration. The shape of the nasals, used as a character of separation between *longicaudata* and *tetradactyla*, varies almost as much as does the color of the pelage, the narrowest examples being no wider than the nasals of *longicaudata* from Maripa, Venezuela.

Cyclopes didactylus didactylus (Linnæus).
 Myrmecophaga didactyla Linnæus, Syst. Nat. I, p. 51.
 One specimen: Penal Settlement, skin and skeleton.

Dasypus novemcinctus novemcinctus Linnæus.
 Dasypus novemcinctus Linnæus, Syst. Nat. I, p. 54.
 Four specimens: Kartabo, 4 skins, 4 skulls, 2 skeletons.
 These are all half grown young.

## 12. Tatu kappleri (Krauss).

1862. Dasypus kappleri Krauss, Archiv. Naturg., Vol. I, p. 24.

Three specimens: Kartabo, 2 skins, 1 skull; Kalacoon, 1 skin with skeleton.

These are the first specimens of *kappleri* to be received in the Museum's collection. This species is widely different from *Dasypus novemcinctus*, which it resembles somewhat superficially. Aside from a slight difference in size, *kappleri* being the larger, it has only eight movable bands instead of nine, it has two rows of spur-like scales on the hind legs which are entirely wanting on *novemcinctus*, a rudimentary fifth toe on the fore foot, longer ears and noticeably different skull characters, the most important of which is the peculiar flange-like margins of the posterior palate.

#### 13. 'I ayassu pecari beebei Anthony.

1921. Tayassu pccari beebei Anthony, Amer. Mus. Novitates, No. 19, p. 1.

Eight specimens: Kartabo, 7 skins, 7 skulls, 2 skeletons.

General Characters.<sup>2</sup>—Closely related to *pecari*, but differing in the extent of white on the snout and lower jaw.

Description.—Coloration about as in p. pecari but white of face and throat markings more yellowish; long hairs of upper parts brownish black; snout, above, only slighter lighter in color than rest of upper parts and not with strongly contrasting whitish of p. pecari; chin and throat patch restricted and not in such marked contrast to the surrounding areas; feet dark to hoofs. Skull as in p. pecari.

Measurements.—Taken from animal in flesh: total length, 1090 mm.; tail vertebrae, 60; hind foot, 224: weight 80 pounds.

This subspecies was described upon the basis of the restricted white areas upon the nose and throat. It is closely related to true *pecari* of Brazil, and was named in honor of Mr. William Beebe, the Director of the Tropical Research Station.

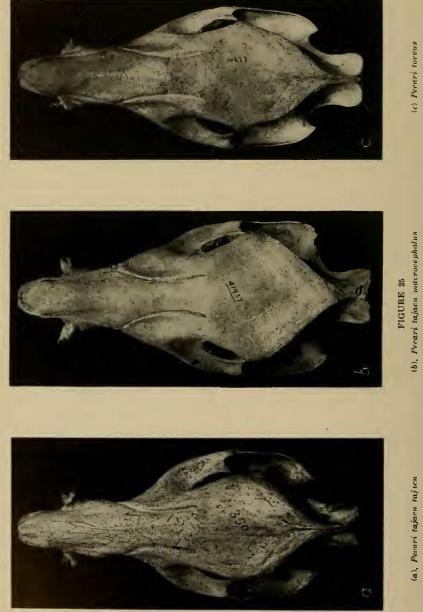
#### 14. Pecari tajacu macrocephalus Anthony.

1921. Pecari tajacu macrocephalus Anthony, Amer. Mus. Novitates. No. 19, p. 3.

Eight specimens: Kartabo, 5 skins, 6 skulls.

<sup>2</sup>This description, together with those of the other three new species, appeared first in American Museum Novitates, No. 19, by H. E. Anthony.





All figures three eighths natural size.

General Characters.—Similar to tajaca but with skull larger and markedly different in structure.

Description.—Pelage about as in *tajacu*, grizzled yellowish and black, with black dorsal area; collar fairly well outlined.

Skull larger than that of tajacu, with more massive build, the forward extension of the zygomatic flange continued to canine alveolus and forming a heavy rostrum; outline of entire skull noticeably subtriangular viewed either from above or below, due to extended zygomatic flange; palate throughout anterior portion wider than distance across the molar series of that portion.

Measurements.—Taken in the flesh: total length 948 mm.; length of hind foot, 195.

*Macrocephalus* has been set off from typical *tajacu* because of important cranial differences. The Kartabo skulls have wide zygomatic flanges, which extend well out on the rostrum and give to the skull a subtriangular outline, when viewed from above or below. The skulls of true *tajacu* from Brazil have much slenderer rostra and the outline is flask-like.

## 15. Mazama americana tumatumari Allen.

1915. Mazama americana tumatumari Allen, Bull. Amer. Mus. Nat. Hist., XXXIV, p. 536.

Two specimens: Kartabo, 1 skin with skull; Kalacoon, 1 skin, spotted.

The specimen in the adult pelage appears to agree with the type, from Tumatumari, which is at no great distance from Kartabo and Kalacoon.

The very young specimen, which is only a flat skin without skull, is very brightly colored with numerous and conspicuous buffy spots.

#### 16. Mazama nemorivaga (F. Cuvier).

1817. Cervus nemorivagus F. Cuvier, Diction. Sci. Nat. VII, p. 485 (part, the Cayenne specimens only).

1915. Mazama nemorivagus Allen, Bull. Amer. Mus. Nat. Hist. XXXIV, p. 548.

Nineteen specimens: Bartica, 1 skin; Kartabo, 11 skins, 9 skulls, 1 skeleton; Kalacoon, 4 skins, 2 skulls, 2 skeletons.

There is considerable variation in color shown by this large series, although all are some shade of light brown. The variation consists chiefly in a more or less extensive darkening of the dorsal area and, to a lesser degree, in the intensity of the dark coloring on the legs. Four young, in the spotted coat, are included in the series, the youngest of which is very conspicuously spotted but the oldest is only very faintly marked and about to assume a pelage like that of the adult.

## 17. Hydrochærus hydrochærus (Linnæus).

#### 1776. Sus hydrochærus Linnæus, Syst. Nat., I p. 103.

Two immature specimens: Kartabo, skins with skeletons.

These specimens are too young, being about the size of *Sylvilagus*, to give any characters.

## 18. Dasyprocta aguti flavescens (Thomas)

1898. Dasyprocta rubrata flavescens Thomas, Ann. and Mag. Nat. Hist., (7), II, p. 274.

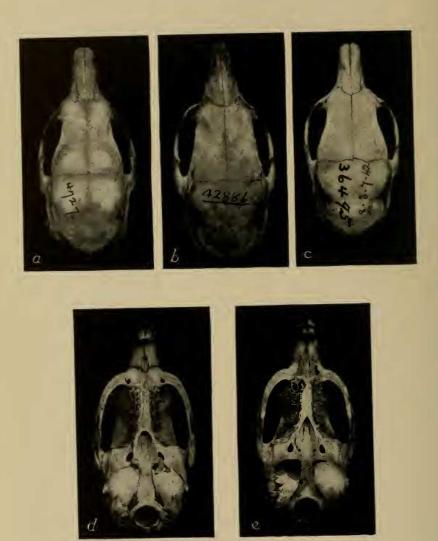
Thirty-four specimens: Kartabo, 20 skins, 33 skulls, 1 skeleton; Kalacoon, 1 skull.

This large series exemplifies the degree of variation found in the genus. The intensity of coloration on the rump varies from ochraceous—orange to Sanford's brown (Ridgway, Color S'andards and Nomenclature); the extent of the bright area is often considerably reduced by the encroachment of the darker colored hairs of the upper dorsal region; the nape and shoulders, while normally quite dark, are sometimes much lighter and the degree of punctulation is far from constant.

Mr. Oldfield Thomas has referred<sup>a</sup> the northern Guiana agoutis to the above species, mentioning among his specimens a large series from Demerara. Specimens in our collection from Tumatumari, British Guiana, are indistinguishable from the Kartabo series, although they had previously been identified as *lucifer cayennae*. I agree with Mr. Thomas that the Guiana specimens have nothing to do with Wagler's *prymnolopha*, since none of the large series of *flavescens* before me

<sup>&</sup>lt;sup>3</sup>1917, Ann. and Mag. Nat. Hist., (8), XX, p. 259.





#### FIGURE 26

- (a), Dorsal aspect of skull of Echimys armatus, Trinidad.
- (b), Dorsal aspect of skull of Echimys longirostris, Kartabo.
- (c), Dorsal aspect of skull of Echimys armatus, Demerara.
- (d), Ventral aspect of skull of *Echimys longirostris*, same skull as shown in b.
- e). Ventral aspect of skull of Echimys armatus, same skull as shown in c.

All figures natural size.

shows any tendency toward the development of a black rump patch, which is a very conspicuous feature of *prymnolopha*.

## 19. Agouti paca paca (Linnæus).

1766. Mus paca Linnæus, Syst. Nat., I, p. 81.

Two specimens: Kartabo, skins with skulls.

These specimens are provisionally identified as paca but it is possible that they represent *fulvus* of Cuvier. Owing to a scarcity of suitable material from northeastern South America, and to the rather confusing status of the group as set forth in literature, the wide range of individual variation making identification from written descriptions most difficult, I have thought it best to assign the Guiana material to *paca*.

## 20. Proechimys cayennensis (Desmarest).

1817. Echimys cayennensis Desmarest, Nouv. Dict., X, p. 59.

Eleven specimens: Kartabo, 4 skins, 3 skulls, 4 skeletons; Kalacoon, 1 skin; Samiri Island, Mazaruni River, 6 skins.

The relationships of *cayennensis*, as given by Thomas<sup>4</sup>, are with *trinitatis*, and this series of spiny rats from Guiana bear considerable resemblance to the rats from Trinidad, both superficially and in cranial characters.

#### 21. Echimys longirostris Anthony.

1921. Echimys longirostris Anthony, American Museum Novitates, No. 19, p. 5.

One specimen: Kartabo, skin and skeleton.

General Characters.--Most like *armatus*, but differing in characters of pelage and in significant details of cranial structure, having much longer nasals and shallow postpalatal notch.

Description.—Pelage spiny, but with many unmodified hairs which partially mask the spines; hairs on crown only slightly spinous; color above, a mixture of black, ochraceous and buff, the ochraceous strongest on nose and face and posterior to shoulders along dorsal area; black strongest on neck and shoulders; flanks lighter than dorsal area and merging insensibly into the grayish under parts; hairs of underparts subspinous, gray at base and tipped with buff; pectoral area more brightly colored than posterior

<sup>&</sup>lt;sup>4</sup>1903, Ann. and Mag. Nat. Hist., (7), XI, p. 491.

under parts; hands and feet grizzled gray, buff and ochraceous, dirty white distally; tail haired at base for about 50 mm., colored same as rump, scaly for rest of its length, sparsely haired, practically unicolor, ashy in color.

Skull elongate with convex superior outline; nasals long, slender, subcylindrical; lateral margins of temporals forming straight lines, not concave; postpalatal notch U-shaped, reaching scarcely beyond the posterior margin of last molar; molar pattern typical of the genus.

Measurements.—Taken from dried skin; total length 466 mm., tail vertebræ 225; hind foot 38.

Although no less than three different names have been employed for the *Echimys* of British Guiana, the types have been determined to be specifically identical so that *guianae* and *castaneus* stand as synonyms of *armatus*. The Kartabo *Echimys* could be identified under none of these names and it was necessary to make it a new species. A fair amount of comparative material representing all three of these names has been available but no specimen was found which had such long nasals nor such a great interorbital breadth.

#### 22. Mus musculus musculus Linnæus.

1758. Mus musculus Linnæus, Syst. Nat., I, p. 62.

Twelve specimens: Kartabo, 1 skin; Georgetown, 11 skins, 5 skulls.

23. Rattus rattus alexandrinus (Geoffroy).

1818. Mus alexandrinus Geoffroy, Descr. Egypt, II, 733.

Twenty-three specimens: Georgetown, 17 skins, 9 skulls, 3 skeletons; Penal Settlement, 6 skins, 3 skulls, 1 skeleton.

#### 24. Ecomys guianæ Thomas.

1910. Œcomys guianæ Thos. Ann. and Mag. Nat. Hist., (8) VI, p. 187.

Two specimens: Kartabo, 2 skins, 1 skeleton.

These specimens agree with the description of guiana closely enough to be so identified and they were taken sufficiently near to the type locality of guiana, River Supinaam, to be considered topotypical.

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## 25. *Ecomys nitedulus* Thomas.

1910. Œcomys nitedulus Thos. Ann. and Mag. Nat. Hist., (8) VI, p. 505.

Three specimens: Kartabo, 3 skins, 1 skull, 1 skeleton.

The type locality of *nitedulus* is the lower Essequibo River, thirteen miles from mouth, which is not very distant from Kartabo. The specimens from Kartabo are none of them old adults and consequently appear to be a trifle smaller than the measurements given by Thomas.

## 26. *Ecomys rutilus* Anthony.

1921. Œcomys rutilus Anthony, Amer. Mus. Novitates, No. 19, p. 4.

One specimen: Kartabo, skin with skeleton.

General Characters.—A small, brightly colored species, with very short tail and clear white under parts.

Description.—Color above, between amber brown and hazel (Ridgway), darkest along dorsal area and on crown, the hairs slaty black for basal two-thirds; below, clear white, the hairs white to the base; hands and feet dirty white, almost dusky; dark orbital ring with small dark area at posterior corner of the eye; tail brownish, unicolor. Skull small and broad, rostrum very short, zygomata flaring, a low supra-orbital beading.

Measurements.—Taken in the flesh: total length, 171 mm.; tail vertebrae, 94; hind foot, 20. Greatest length of skull, 24.2; zygomatic breadth, 13.5; length of nasals, 7.7; interorbital breadth, 4.4; breadth of brain case, 11; palate, to incisors, 10; palatal foramina, 3.7x2.2; length of upper molar series, 3.4.

This is a small, brightly colored mouse, of the genus *Œcomys*, quite distinct from the other *Œcomys* collected there, *nitedulus*, and possibly a relative of *rosilla* Thomas, from which it differs however in clear white underparts.

#### 27. Neacomys guianae Thomas.

1905. Neacomys guianæ Thomas, Ann. and Mag. Nat. Hist., (7) XVI, p. 310.

Two specimens: Kartabo, 2 skins, 1 skull, 2 skeletons.

These specimens are essentially topotypes since Thomas gives the type locality as the Demerara River, altitude 120 feet.

28. Nectomys squamipes melanius Thomas.

1910. Nectomys squamipes melanius Thomas, Ann. and Mag. Nat. Hist., (8) VI, p. 185.

Twenty-three specimens: Kartabo, 7 skins, 6 skulls, 6 skeletons; Kalacoon, 1 skin; Kyk-over-al, 11 skins, 8 skulls, 4 skeletons; Samiri Island, Mazaruni River, 4 skins.

The series agrees quite closely with the description of the type, and as the type locality is given as the lower Essequibo River, twelve miles from mouth, the Beebe specimens are practically topotypes.

## 29. Oryzomys velutinus?

1893. Oryzomys velutinus Allen, Bull. Amer. Mus. Nat. Hist., V, p. 214.Ten specimens: Kartabo, 10 skins, 3 skulls, 3 skeletons.

The short-haired *Oryzomys* of the Beebe collection are provisionally referred to *velutinus*, although it may be questioned whether *velutinus* is not truly insular and the name not to be used for mainland forms. Without specimens of Lund's *laticeps* for comparison, and because of the confusing status of the *Oryzomys* of northeastern South America, these specimens are so named now, merely for the sake of convenience, but it is quite possible that more material will show them to be a subspecies of *laticeps*. These specimens agree quite closely with *velutinus* from Trinidad.

## 30. Oryzomys sp.?

One specimen: Bartica, skin, without skull.

This is a large species, strongly ochraceous above and buffy white below. It is not unlike *trinitatis* in general appearance, and on the other hand it agrees fairly well with the type description of *macconnelli*<sup>5</sup> but appears to be rather too small in size.

## 31. Oryzomys sp.?

Two specimens: Kartabo, 2 skins, 1 skull.

<sup>5</sup> 1910. Thomas, Ann. and Mag. Nat. Hist., (8) VI, p. 186.

These two specimens are of the *meridensis* group and possibly are closely related to *caracolus* Thomas<sup>6</sup> described from near Caracas, Venezuela.

## 32. Guerlinguetus astuans astuans (Linnæus).

1766. Sciurus æstuans Linnæus, Syst. Nat., I, p. 88, (Surinam). 1915. Guerlinguetus æstuans æstuans Allen, Bull. Amer. Mus. Nat Hist., XXXIV, p. 256.

Five specimens: Kartabo, 5 skins, 3 skulls, 2 skeletons.

This series is especially acceptable since this species of the Guiana lowlands has hitherto been very poorly represented in the Museum collection.

33. Procyon cancrivorus cancrivorus (Cuvier).

1798. Ursus cancrivorus Cuvier, Tabl. Elem. Hist. Nat., p. 113.

Two specimens: Penal Settlement, 2 skins, 2 skulls, 1 skeleton.

34. Potos flavus flavus (Schreber).

1775. Lemur flarus Schreber, Säug. I., p. 145, pl. 42.

Two specimens: Kalacoon, 1 skin, 1 odd skull.

35. Lutra mitis Thomas.

1908. Lutra mitis Thomas, Ann. and Mag. Nat. Hist., (8), I, p. 393.

Three specimens: Kartabo, 1 skin, 1 skull, 1 skeleton; Kalacoon, 1 skull.

The skin and the skulls seem to agree fairly well with Thomas's description of the type.

36. Tayra barbara barbara (Linnaus).

1766. Mustela barbara Linnæus, Syst. Nat., I, p. 67.

Four specimens: Kartabo, 2 skins, 2 skulls, 2 skeletons; Kalacoon, 1 skull.

<sup>6</sup>1914. Ann. and Mag. Nat. Hist., (8) XIV, p. 242.

One specimen has the head and neck above grizzled gray and the chest area dirty whitish; the other has the corresponding areas yellowish above and pale ochraceous below.

The odd skull is unusually large, with a very high sagittal crest, and measures, greatest length, 130 mm.; zygomatic breadth, 78.5 against 107 and 65, the dimensions of an adult female from Kartabo.

#### 37. Nasua phacocephala Allen.

1904. Nasua phæocephala Allen, Bull. Amer. Mus. Nat. Hist., XX, p. 334.

Four specimens: Kartabo, 3 skins, 3 skulls, 1 skeleton; Kalacoon, 1 skeleton.

These specimens agree well in coloration with the type of *phacocephala*, from Suapure, Venezuela.

#### 38. Panthera onca (Linnæus).

1766. Felis onca Linnæus, Syst. Nat., I, p. 61.

One specimen: Kartabo, skin and skull, adult male.

Skull measurements: Greatest length, 238 mm.; length of nasals, 57; zygomatic breadth, 160; mastoid breadth, 99; breadth of rostrum, 67; length of upper tooth row to incisors, 95.

39. Margay tigrina vigens (Thomas).

1904. Felis weidii vigens Thos., Ann. and Mag. Nat. Hist., (7) XIV, p. 192.

1919. Margay tigrina vigens Allen, Bull. Amer. Mus. Nat. Hist., XLI, p. 357.

One specimen: Kartabo, skin with skeleton.

This specimen agrees, in most essential characters, with the type description of *vigens* (*loc. cit.*). The skull measurements are a trifle larger for the Kartabo animal and the color pattern varies slightly from that given by Thomas, in the lesser number of dark rings on the tail and the whiter underparts.

#### 1921 Anthony: British Guiana Mammals

#### 40. Herpailurus yaguarondi unicolor (Traill).

1819. Felis unicolor Traill, Mem. Wernerian Soc., III, p. 170. 1919. Herpailurus yaguarondi unicolor Allen, Bull. Amer. Mus. Nat. Hist., XLI, p. 383.

One specimen: Kartabo, skin and skeleton, adult male.

This rare cat is in the black phase and is a glistening black all over, except about the head and neck which is grizzled with gray.

Measurements, taken in the flesh; total length, 1150 mm.; tail vertebræ, 470; hind foot, 155; weight, 19 pounds.

Skull, greatest length, 112 mm.; basal length, 99; zygomatic breadth, 71; breadth of braincase, 43.5; length entire upper tooth row, 42.7.

## 41. Saccopteryx bilineata (Temminck).

1839. Urocryptus bilineatus Temminck, Van der Hoeven, Tijdsch. Natur., p. 33.

Three specimens in alcohol: Kalacoon.

## 42. Rhynchiscus naso (Wied).

1821. Vespertilio naso Wied, Schinz's Thierreich, Vol. I, p. 179.

Thirteen specimens in alcohol: Kaow Island, Essequibo River, 12; Kartabo, 1.

The collector's notes state that these bats were found "on bark of tree."

## 43. Glossophaga soricina soricina (Pallas).

1766. Vespertilio soricinus Pallas, Miscell. Zool., p. 48.

Sixty specimens: Creeklands, Berbice, 28 skins, 20 skulls, 20 skeletons; Georgetown, 6 skins, 16 alcoholics; Kartabo, 10 alcoholics.

This large series of *Glossophaga* presents but little variation in color and appears to be typical *soricina* in every character. 44. Hemiderma perspicillatum perspicillatum (Linnæus).
1758. [Vespertilio] perspicillatus Linnæus, Syst. Nat., I, p. 31.

Fifty-seven specimens: Georgetown, 10 skins; 29 alcoholics; Kalacoon, 4 alcoholics: Kartabo, 14 alcoholics.

This series is quite uniform in character and presents no points worthy of comment.

#### 45. Mesophylla macconnelli Thomas.

1901. Mesophylla macconnelli Thomas, Ann. and Mag. Nat. Hist., (7), VIII, p. 145.

Seven specimens in alcohol: Kartabo, July 22, 1920.

This genus has hitherto been unrepresented in the Museum collection, but there is little difficulty in identifying it from the description given by Miller in "The Families and Genera of Bats," p. 158. The most conspicuous features of the skull are the swollen maxillaries and depressed nasal region, while the pelage of *macconnelli* is very light colored.

These specimens were taken at no very great distance from the type locality of the species which is Kanuku Mountains, British Guiana.

46. Phyllostomus hastatus hastatus (Pallas).

1767. Vespertilio hastatum Pallas, Spici. Zool., III, p. 7.

Three specimens in alcohol: Kartabo, 2; Kalacoon, 1.

47. Vampyrus spectrum spectrum (Linnæus).

1766. Vespertilio spectrum Linnæus, Syst. Nat., I, p. 46.

One specimen: Kartabo, skin and skeleton.

This very large species is represented by only one specimen which appears to be typical in all respects. The forearm is 104 mm. long.

48. Furipterus horrens (F. Cuvier).

1828. Furia horrens Cuvier, Mem. Mus., XVI, p. 150.

Six specimens: Kartabo, April 26 to August 25.

This series is a valuable addition to the Museum collection since Furipterus is exceedingly rare. The series is uniform in coloration and the average measurement of the forearm is 34.9 mm.

## 49. Eumops milleri (Allen).

1900. Promops milleri Allen, Bull. Amer. Mus. Nat. Hist., XIII, p. 91 Two specimens (1 imm.) in alcohol: Kartabo.

The adult specimen agrees fairly well in all characters but size with the type of *milleri*. In cranial characters the two are identical with the following exceptions, the Kartabo specimen has slightly smaller upper incisors and less extensive basicranial pits. The following measurements are of the Kartabo bat, contrasted with the type of *milleri* in parentheses; forearm, 55 mm. (58.7); greatest length of skull, 24.7 (25.2); zygomatic breadth, 14.2 (14.2): length of upper tooth row, C-M<sup>3</sup>, 9.3, (9.8).

This specimen is not unlike the type of *Eumops barbatus* (Allen) which differs from *milleri* mainly in size only. Additional material may show that *barbatus* should stand either as a subspecies of *milleri* or as its synonym, and the older name of *milleri* is followed, because of the inadequate material representing *barbatus*, the type being unique.

## 50. Molossus obscurus Geoffroy.

1805. Molossus obscurus Geoffroy, Ann. du Mus., VI, p. 154.

Twenty-two specimens: Georgetown, 9 alcoholics; Kalacoon, 1 skin, 9 alcoholics; Kartabo, 3 alcoholics.

Only one specimen of the entire series is in the red phase.

## 51. Molossus rufus Geoffroy.

1805. Molossus rufus Geoffroy, Ann. du Mus., VI, p. 154.

Six specimens: Georgetown, 3 skins; Kartabo, 1 alcoholic; Penal Settlement, 2 alcoholics. These specimens are in the dark phase, and the Kartabo example has a forearm 48 mm. in length.

## 52. Saimiri sciureus (Linnæus).

1758. Simia sciurea Linnæus, Syst. Nat. I, p. 19.
1913. Saimiri sciureus Elliot, Review of the Primates, I, p. 310.

Five specimens: Kartabo, 3 skins, 2 skulls, 1 skeleton; Kalacoon, 1 skin, 1 skull.

Of the Saimiri taken in British Guiana, all but one appear to be typical sciureus, the series being fairly uniform in coloration. The exception, a skin without skull, differs in having black lateral stripes on the head and behind the eye, while the dorsal region is a much brighter color than in the other specimens, being quite yellow. This specimen, from Kartabo, I have provisionally identified as cassaquiarensis, a considerable extension of range, if the identification proves to be correct, since the range of this species is to the west of British Guiana.

## 53. Saimiri cassaquiarensis (Humboldt).

1811. Chrysothrix sciurcus cassaquiarensis Humboldt, Rec. Obs. Zool. I, p. 334, (1815)

1913. Saimiri cassaquiarensis Elliot, Review of the Primates, I, p. 311. One specimen: Kartabo, skin without skull.

54. Alouatta seniculus macconnelli (Elliot).

1910. Alouatta macconnelli Elliot, Ann. and Mag. Nat. Hist., (8), V. p. 80.

1916. Alouatta seniculus macconnelli Allen, Bull. Amer. Mus. Nat. Hist., XXXV, p. 233.

Thirty-three specimens: Kartabo, 22 skins, 23 skulls, 8 skeletons; Kalacoon, 3 skins, 7 skulls.

This large series displays a very considerable range of individual variation in color. The general tone of the upper parts varies from yellow to bright orange red, with a corresponding lack of uniformity in the coloration of the limbs and tail, which in some specimens are much darker than the upper